

BOARHEAD FARMS  
ADMINISTRATIVE RECORD FILE \*  
INDEX OF DOCUMENTS

I. SITE IDENTIFICATION

1. Handwritten notes on investigation of stream pollution complaint, prepared by B. Passmore and P. Noll, Bucks County Department of Health (BCDOH), 4/28/72. P. 100001-100001.
- \*\* 2. Complaint for Search Warrant, Commonwealth of Pennsylvania Department of Environmental Resources (PADER), 3/5/73. P. 100002-100005. The search warrant is attached.
- \*\* 3. PADER Waste Discharge Inspection Report, Boarhead Corporation, 3/5/73. P. 100006-100006.
- \*\* 4. Memorandum to C.T. Beechwood, BCDOH, from Mr. Albert W. Wills, BCDOH, re: Detailed Inspection by Search Warrant of Boarhead Corporation, 3/7/73. P. 100007-100009. A site sketch is attached.
- \*\* 5. Memorandum to Mr. David Lindorff, PADER, and Mr. John F. Zwalinski, PADER, from Mr. Wayne L. Lynn, PADER, re: Field investigation of Boarhead Corporation, 3/12/73. P. 100010-100012.
- \*\* 6. PADER Waste Discharge Inspection Report, Boarhead Corporation, 10/31/73. P. 100013-100015. A handwritten memorandum regarding past inspection at Boarhead Corporation is attached.
- \*\* 7. Memorandum to Mr. John Daly, Jr., BCDOH, from Mr. Albert W. Wills, BCDOH, re: Summary of Boarhead Corporation Investigations and Request for Enforcement Action, 11/1/73. P. 100016-100018.
- \* Administrative Record File available 5/21/92, updated 6/26/92, 1/5/98, 3/6/98, and 11/24/98.
- \*\* These documents form the basis for the Unilateral Administrative Order For Access (Docket No. III-92-34-DC).

8. Memorandum to Mr. Denver Lindley, Jr., BCDOH, from Mr. Albert W. Wills, BCDOH, re: Stream Pollution Status Report, 1/8/74. P. 100019-100021.
- \*\* 9. PADER Waste Discharge Inspection Report, Boarhead Corporation, 7/16/75. P. 100022-100022.
- \*\* 10. Telephone conversation record of B. Passmore, BCDOH, with Chief John Lapsley, Bridgeton Township Police, re: Report of a substance being spilled on the highway, 7/16/75. P. 100023-100023.
11. Memorandum to C.T. Beechwood, BCDOH, from Mr. Albert W. Wills, BCDOH, re: Violation of Pollution Incident Prevention Order at Boarhead Corporation, 7/24/75. P. 100024-100025.
- \*\* 12. PADER Waste Discharge Inspection Report, Boarhead Corporation, 4/1/76. P. 100026-100026.
13. Memorandum to Mr. Guy E. Manley, PADER, from Mr. Peter G. Noll, BCDOH, re: Request that violation notice be sent to Boarhead Corporation due to discharge of liquid ammonia into a pond, 5/21/76. P. 100027-100027.
14. Letter to Mr. Manfred DeRewal, Boarhead Corporation, from Mr. Guy E. Manley, PADER, re: Violation of the Clean Streams Law and Rules and Regulations regarding Potential Pollution, 6/8/76. P. 100028-100028.
- \*\* 15. County of Bucks Complaint/Information Report, prepared by Chief John Lapsley, Jr., 9/8/76. P. 100029-100032.
- \*\* 16. PADER Waste Discharge Inspection Report, Boarhead Corporation, 9/8/76. P. 100033-100033.
17. Memorandum to Mr. Bob Caron, U.S. EPA, from Ms. Christine Hylemon, Roy F. Weston Inc. (Weston), re: Sampling results concerning the Site Assessment, 4/27/84. P. 100034-100035.
18. Report: Preliminary Assessment of Boarhead Farms, prepared by NUS Corporation (NUS), 8/22/85. P. 100036-1000172.
19. Report: Site Inspection of Boarhead Farms, prepared by NUS, 1/20/86. P. 100173-100256.

II. REMEDIAL ENFORCEMENT PLANNING

- \*\* 1. Unilateral Administrative Order For Access In The Matter Of Boarhead Farms, Docket No. III-92-34-DC, 5/29/92. P. 200001-200022. A cover letter is attached.

### III. REMEDIAL RESPONSE PLANNING

- \*\* 1. "National Priorities List for Uncontrolled Hazardous Waste Sites - Final Update No. 5," Federal Register, Vol. 54, No. 61, pages 13296-13317, 3/31/89. P. 300001-300022.
- \*\* 2. Data Summary Form: Inorganics, Water Samples, Boarhead Farms Superfund Site, case #15320, 11/14/90-11/16/90. P. 300023-300023. The results for the Shaak/Keystone Excavating Well are highlighted.
- \*\* 3. List of Hazardous Substances and Reportable Quantities packet, 40 C.F.R. Section 302.4, 7/1/91 Edition. P. 300024-300047.
- \*\* 4. Letter to Mr. Robert J. Shusterman, Attorney, Boarhead Corporation, from Ms. Lisa Nichols, U.S. EPA, re: Discussion of Site Access at the Boarhead Farms Site, 12/20/91. P. 300048-300051. A Right-of-Entry form is attached.
- \*\* 5. Letter to Ms. Lisa Nichols, U.S. EPA, from Mr. Robert J. Shusterman, Attorney, Boarhead Corporation, re: Request for meetings concerning site boundaries, aerial work, and project background, 1/9/92. P. 300052-300053.
- 6. Memorandum to Ms. Lisa Nichols, U.S. EPA, from Ms. Nancy Rios, U.S. EPA, re: Residential well sample analyses, 2/3/92. P. 300054-300057. Table 1, Residential Well Sample Analyses Data, is attached.
- 7. Technical Status Report, Boarhead Farms, prepared by Ms. Donna Connery, CH2M Hill, 2/10/92. P. 300058-300058.
- \*\* 8. Telephone conversation record with Mr. Bob Shusterman, re: Denial of access to the site, 2/21/92. P. 300059-300059.
- \*\* 9. Letter to Mr. Brian Nishitani, U.S. EPA, from Mr. Robert J. Shusterman, Attorney, Boarhead Corporation, re: Denial of access to the site and dissatisfaction with EPA actions, 2/21/92. P. 300060-300061.
- \*\* 10. Residential well sampling packet, prepared by CH2M Hill, 4/20/92. P. 300062-300080.

11. Excerpt from Federal Environmental Laws: Section 101 of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Section 9601, (undated). P. 300081-300082.
- \*\* 12. Report: Boarhead Farms RI/FS Work Plan, prepared by CH2M Hill, 8/91. P. 300083-300305.
13. Report: Sampling and Analysis Plan for Boarhead Farms RI/FS, Volume 1 of 2, prepared by CH2M Hill, 11/91. P. 300306-300545.
14. Report: Sampling and Analysis Plan for Boarhead Farms RI/FS, Volume 2 of 2, prepared by CH2M Hill, 11/91. P. 300546-300894.
15. Report: Stage 1A Cultural Resources Investigation, Boarhead Farms Site, Upper Black Eddy, Bridgeton Township, Bucks County, Pennsylvania, prepared by Ebasco Environmental, 3/91. P. 300895-300944. Two letters regarding the narrowing of the buffer zone around the historical site for the purpose of investigating buried metal anomalies are attached.
16. Letter to Ms. Lisa Nichols, U.S. EPA, from Mr. Robert J. Shusterman, Attorney, Boarhead Corporation, re: Farmhouse and Keystone well results, 2/25/92. P. 300945-300947.
17. Letter to Mr. Robert J. Shusterman, Attorney, Boarhead Corporation, from Ms. Lisa Nichols, U.S. EPA, re: Alleged drum burials versus the magnetic anomalies and residential well sampling, 3/17/92. P. 300948-300951.
18. Report: Sampling and Analysis Plan for Boarhead Farms Site, Remedial Investigation and Feasibility Study, Volume 1, prepared by CH2M Hill, 11/91. P. 300952-301047. An October 18, 1993, transmittal letter to Mr. Harry Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, is attached.
19. Laboratory Report: Boarhead Farm Pit W Drum #33, prepared by MDS Laboratories (MDS), 7/27/92. P. 301048-301091.
20. Letter to Ms. Lisa Nichols, U.S. EPA, from Ms. Donna

Connery, CH2M Hill, re: Documentation of changes that have taken place at the site which affect the work plan, and a list of activities and proposed schedules to complete the field work portion of the Remedial Investigation/Feasibility Study (RI/FS), 7/28/92. P. 301092-301096.

21. Laboratory Report: Proj #956-019 Boarhead Farm C1 9pt, prepared by MDS, 7/30/92. P. 301097-301121.
22. Laboratory Report: Proj #956-019 Boarhead Farm C1 9pt, prepared by MDS, 7/30/92. P. 301122-301134. A July 30, 1992, Chain of Custody Record is attached.
23. Analysis logs and sample data for the site, 7/30/92. P. 301135-301186.
24. Semivolatile Organics Analysis Data Sheet, Tentatively Identified Compounds, prepared by Compuchem, 9/27/92. P. 301187-301187.
25. Memorandum to Ms. Lisa Nichols, U.S. EPA, from Mr. Dave Kargbo, U.S. EPA, re: Comments on CH2M Hill's comment letter concerning the modeling to establish preliminary remediation goals (PRGs) for soils around the excavated drums, 10/1/92. P. 301188-301189.
26. Report: Inorganic Data Validation for Case 18696, prepared by CH2M Hill, 11/12/92. P. 301190-301217. A November 30, 1992, transmittal memorandum to Ms. Lisa Nichols, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
27. Report: Organic Data Validation for Case 18598, SDG CHS01 (Part I of V), prepared by CH2M Hill, 11/30/92. P. 301218-301351. A December 28, 1992, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
28. Report: Inorganic Data Validation for Case 18598, prepared by CH2M Hill, 12/2/92. P. 301352-301435. A December 28, 1992, transmittal memorandum to Mr. Harry Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
29. Report: Organic Data Validation for Case 18598, SDG CHS11 (Part II of V), 12/7/92. P. 301436-301636. A

December 28, 1992, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.

30. Report: Organic Data Validation for Case 18598, SDG CLN72 (Part III of V), prepared by CH2M Hill, 12/7/92. P. 301637-301770. A January 7, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
31. Report: Organic Data Validation for Case 18598, SDG CLS06 (Part IV of V), prepared by CH2M Hill, 12/7/92. P. 301771-301829. A January 7, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
32. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Dave Kargbo, U.S. EPA, re: Review and comments concerning Work Plan Addendum No. 2, 12/7/92. P. 301830-301832.
33. Report: Inorganic Data Validation for Case 18751, prepared by CH2M Hill, 12/8/92. P. 301833-301909. A December 28, 1992, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
34. Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Nancy Rios, U.S. EPA, re: Toxicological review and comments concerning the RI/FS Work Plan Addendum No. 2, 12/10/92. P. 301910-301911.
35. Memorandum to Mr. Robert Davis, Biological and Technical Assistance Group (BTAG), from Mr. Robert Burr, U.S. Fish and Wildlife Service, re: Technical comments concerning the RI/FS Work Plan Addendum No. 2, 12/11/92. P. 301912-301914.
36. Report: Organic Data Validation for Case 18751, SDG CLK00 (Part I of IV), prepared by CH2M Hill, 12/14/92. P. 301915-302063. A February 24, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Metzger, U.S. EPA, is attached.
37. Memorandum to Mr. Steve O'Neill, PADER, from Mr. Dennis Matlock, U.S. EPA, re: Response to an October 8, 1992, request for information concerning a temporary water

discharge permit, 12/15/92. P. 302064-302075. The following are attached:

- a) a December 15, 1992, Pennsylvania Fish Commission Application and Permit to Draw off Water from Impoundments;
  - b) an October 8, 1992, memorandum to Mr. Dennis Matlock, U.S. EPA, from Ms. Belinda May, PADER, regarding guidance for a temporary discharge permit;
  - c) a November 17, 1992, U.S. EPA Pollution Report #118, Boarhead Farms Site;
  - d) an undated figure, entitled "Areas of Investigation, Boarhead Farms Site;"
  - e) an undated location map.
38. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of technical issues concerning RI/FS Work Plan Addendum No. 2 discussed during a December 11, 1992, meeting, 12/30/92. P. 302076-302081. A December 30, 1992, site map figure is attached.
39. "Data and Q.C. Summary " appendix, prepared by U.S. EPA, 1/19/93. P. 302082-302217. An undated appendix entitled "Glossary of Data Qualifier Codes " is attached.
40. Letter to Mr. Dennis Matlock, U.S. EPA, from Mr. Joseph Feola, PADER, re: Response to a December 15, 1992, letter requesting approval to discharge water, 2/4/93. P. 302218-302219.
41. Application and Permit to Draw off Water from Impoundments, submitted by Mr. Dennis Matlock, U.S. EPA, on December 15, 1992, 2/8/93. P. 302220-302221.
42. Letter to Mr. Dennis Matlock, U.S. EPA, from Mr. John Thomas, Bucks County Conservation District (BCCD), re: Decision that the proposed discharge of water from the pond at the site will not create a violation to the



Pennsylvania Erosion and Sediment Pollution Control  
Rules and Regulations, 3/15/93. P. 302222-302222.

43. Memorandum to Mr. Steve O'Neil, PADER, from Mr. Peter Stokely, U.S. EPA, re: Review and comments concerning amendments to the Environmental Assessment Form, 3/16/93. P. 302223-302228. A September 1, 1992, memorandum report to Ms. Lisa Nichols, U.S. EPA, from Mr. Peter Stokely, U.S. EPA, concerning the wetlands at the site, and a March 19, 1993, transmittal letter to Mr. Steve O'Neil, PADER, from Mr. Dennis Matlock, U.S. EPA, are attached.
44. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Notification of the schedule for site activities during April and May of 1993 and the biota investigation scope of work, 3/23/93. P. 302229-302240. A January 29, 1993, memorandum to Ms. Donna Connery, CH2M Hill, from Mr. Jim Stark, CH2M Hill, and a December 22, 1992, table summarizing the results of the sediment bioassays on thirteen samples, are attached.
45. Letter to Mr. Dennis Matlock, U.S. EPA, from Mr. Jesse Goldberg, PADER, re: Confirmation of results of a March 9, 1993, inspection of the discharge system for the lower pond at the site, and authorization for the use of the discharge system, 3/24/93. P. 302241-302241.
46. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of additional surface water and sediment samples to be collected, which are not currently in the scope of work, 3/30/93. P. 302242-302246. Figures, "Wetland Area 12, Culvert and Creek Sampling Stations" and "Offsite Sampling Stations," are attached.
47. Report: Technical memorandum, Monitoring Well Installation, Sampling and Hydraulic Conductivity Testing at the Boarhead Farms Superfund Site, Upper Black Eddy, Pennsylvania, prepared by CH2M Hill, 9/93. P. 302247-302346. A September 27, 1993, transmittal

letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, is attached.

48. Report: Inorganic Data Validation (IM2 Level) Case 20165, prepared by U.S. EPA Region III Environmental Services Assistance Team (ESAT), 9/16/93. P. 302347-302436. A September 17, 1993, transmittal memorandum to Ms. Lisa Nichols, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
49. Report: Organic Data Validation Case 20165, prepared by ESAT, 9/29/93. P. 302437-302707. An October 7, 1993, transmittal memorandum to Ms. Lisa Nichols, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
50. Report: Inorganic Data Validation, Case 20368, prepared by ESAT, 10/12/93. P. 302708-302735. An October 18, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
51. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Jeffrey Dodd, U.S. EPA, re: Transmittal of revised data summary forms for Boarhead Farms Site, Case 20582/8019HQ, 10/25/93. P. 302736-302738. The revised data summary forms are attached.
52. Report: Organic Data Validation for Case 20368, prepared by ESAT, 10/25/93. P. 302739-302810. An October 27, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
53. Report: Inorganic Data Validation (IM2 Level) SAS 8048C-01, prepared by ESAT, 11/29/93. P. 302811-302895. A December 2, 1993, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
54. Report: Inorganic Data Validation, Case 21337, prepared by ESAT, 12/93. P. 302896-303064. An April 6, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.

55. Report: Organic Data Validation, Case 21337, prepared by ESAT, 1/94. P. 303065-303661. A March 31, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
56. Report: Analytical Results for Boarhead Farms (REQ 94014), prepared by U.S. EPA, 1/12/94. P. 303662-303718.
57. Table, "Residential Well Sampling-4th Quarter, Boarhead Farms RI/FS," project number NAE63148.FI.FQ, prepared by CH2M Hill, 2/94. P. 303719-303724.
58. Report: Inorganic Data Validation (IM2 Level) Case 21247, prepared by ESAT, 2/11/94. P. 303725-303780. A February 16, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
59. Report: Analytical Results for Boarhead Farms (REQ94026), prepared by U.S. EPA, 2/17/94. P. 303781-303847.
60. Report: Organic Data Validation for Case 21247, prepared by ESAT, 2/17/94. P. 303848-304051. A February 23, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
61. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Belinda May, PADER, re: Guidance on obtaining an application for a temporary water discharge permit, 2/17/94. P. 304052-304053.
62. Memorandum to Mr. Harold Harbold, U.S. EPA, from Stevie Wilding, U.S. EPA, re: Transmittal of bioassay data for the site, and problems associated with the survival of *Hyalella azteca* controls, 2/18/94. P. 304054-304483. The bioassay data are attached.
63. Memorandum report: Boarhead Farms NPL Site Data Compilation Report, prepared by Weston, 2/25/94. P. 304484-304495.
64. Letter to Mr. Jack LaFevere, Upper Black Eddy resident, from Ms. Donna Connery, CH2M Hill, re: Description of

duties, and schedule, for Mr. LaFevere's residential well pump removal and replacement for data collection, 3/2/94. P. 304496-304498.

65. Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Addendum to the September 1993 Technical Memorandum for Monitoring Well Installation, Sampling, and Hydraulic Conductivity Testing, concerning two additional monitoring wells installed at the site, 3/9/94. P.304499-304513.
66. Report: Organic Data Validation SAS 21551/8019HQ, prepared by ESAT, 3/10/94. P. 304514-304756. A March 14, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
67. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Belinda May, PADER, re: Announcement that Mr. David Ewald will be the new PADER Project Officer for the site, 3/10/94. P. 304757-304757.
68. Report: Organic Data Validation SAS 21589/8019Q-02, prepared by ESAT, 3/25/94. P. 304758-304987. A March 30, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
69. Report: Inorganic Data Validation (IM2) SAS: 8158C-01, prepared by ESAT, 3/28/94. P. 304988-305019. A March 29, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
70. Letter to Mr. Steve O'Neil, PADER, from Mr. Harold Harbold, U.S. EPA, re: Temporary water discharge approval, and transmittal of requested information concerning each phase of the ground water work project, 3/28/94. P. 305020-305039. The following are attached:

- a) a local road map, Boarhead Farms, undated;
  - b) Monitoring Well Data Compilation Report, dated February 25, 1994;
  - c) a site map showing proposed discharge location to the on-site pond, dated September 1992;
  - d) a site map showing the proposed location of new wells, dated September 1992;
  - e) a February 4, 1993, PADER temporary discharge approval;
  - f) a September 1, 1992, memorandum to Ms. Lisa Nichols, U.S. EPA, from Mr. Peter Stokely, U.S. EPA, concerning wetlands at the site; and
  - g) a site map showing the existing monitoring well locations, undated.
71. Memorandum to Mr. Harold Harbold and Mr. Bruce Rundell, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of CH2M Hill's understanding of the next phase of drilling to support the RI/FS, based on an April 13, 1994, scoping meeting and an April 15, 1994, follow-up conversation, 4/20/94. P. 305040-305052. The following are attached:
- a) a Boarhead Farms conceptual model;
  - b) handwritten notes, from Ms. Donna Connery, CH2M Hill, regarding Recommended Phase II Well Program; and
  - c) a figure, titled "Test Pit and Monitoring Well Locations," with handwritten notes concerning suggested Remedial Investigation (RI) Phase II drilling.
72. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Addendum to an April 20, 1994, memorandum regarding the scope of work for the Phase II drilling program, concerning further revisions to the scope of work requested, 5/10/94. P. 305053-305056.
73. Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms.

Donna Connery, CH2M Hill, re: Estimate of drilling hours required for labor during Phase II drillings, 5/11/94. P. 305057-305058.

74. Report: Inorganic Data Validation (IM2 Level) Case 21552, prepared by ESAT, 5/20/94. P. 305059-305161. A May 24, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
75. Memorandum to Mr. Larry Leahy, U.S. Army Corps of Engineers (USACE), from Mr. Robert McGlade, Weston, re: Transmittal of background information on the site, as directed by Mr. Gerald Heston, U.S. EPA, 5/27/94. P. 305162-305180. A February 25, 1994, data compilation report, five maps which identify locations of metal anomalies, and results of the June 1993 Magnetometer Survey are attached.
76. Agency for Toxic Substances and Disease Registry (ATSDR) Record of Activity, requested by Mr. Harold Harbold, U.S. EPA, 6/14/94. P. 305181-305204. The following are attached:
  - a) a July 16, 1992, ATSDR Record of Activity;
  - b) an August 31, 1992, ATSDR Record of Activity; and
  - c) The ATSDR Health Assessment: A Note of Explanation.
77. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. Joseph Feola, PADER, re: Response to March 28, 1994, letter requesting approval for a temporary discharge of treated ground water, and approval granted under specified conditions, 6/21/94. P. 305205-305206.
78. Report: Analytical Results for Boarhead Farms (REQ 94026), prepared by U.S. EPA, 6/22/94. P. 305207-305243.
79. Letter to Mr. Dana and Ms. Donna Johnson, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the maximum contaminant level (MCL), 7/11/94. P. 305244-305244.

80. Letter to Mr. Eugene and Ms. Virginia Woods, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305245-305245.
81. Letter to Mr. William and Ms. Sally Fineran, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305246-305246.
82. Letter to Mr. and Mrs. Christopher Hopf, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January and February 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305247-305247.
83. Letter to Ms. Lorraine Kralovich, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of her residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305248-305248.
84. Letter to Mr. Henry and Ms. Margaret Swiantecke, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305249-305249.
85. Letter to Mr. Henry and Ms. Mary Swiantecke, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305250-305250.
86. Letter to Mr. Raymond Miller, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of his residential well, indicating chemical contaminants in excess of the MCL, 7/11/94. P. 305251-305251.
87. Letter to Mr. John and Ms. Laurie DeBoer, Upper Black

- Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating chemical contaminants in excess of the MCL, 7/11/94. P. 305252-305252.
88. Letter to Ms. Susan Cichowski, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of her residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305253-305253.
89. Letter to Mr. Jack and Ms. Barbara Guth, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating chemical contaminants in excess of the MCL, 7/11/94. P. 305254-305254.
90. Letter to Mr. Drew and Ms. Debbie Smith, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/11/94. P. 305255-305255.
91. Letter to Mr. Francis and Ms. Margaret Petner, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating chemical contaminants in excess of the MCL, 7/11/94. P. 305256-305256.
92. Letter to Mr. Mark and Ms. Catherine Leidtke, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of their residential well, indicating that chemical contaminants were undetected or below the MCL, 7/12/94. P. 305257-305257.
93. Letter to Mr. Patrick Fasano, resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of his residential well, indicating that chemical contaminants were undetected or below the MCL, 7/12/94. P. 305258-305258.
94. Letter to Ms. Elanor Todd, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a



February 1994 sampling of her residential well, indicating that chemical contaminants were undetected or below the MCL, 7/13/94. P. 305259-305259.

95. Letter to Mr. Art Haney, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of his residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/13/94. P. 305260-305260.
96. Letter to Mr. Lester Brown, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of his residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/13/94. P. 305261-305261.
97. Letter to Mr. and Mrs. Legg, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of their residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/13/94. P. 305262-305262.
98. Letter to Mr. Richard Lewis, Chalfont resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of his residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/18/94. P. 305263-305263.
99. Letter to Mr. Charles Myers, Chalfont resident, from Mr. Harold Harbold, U.S. EPA, re: Results from a January 1994 sampling of his residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/18/94. P. 305264-305264.
100. Letter to Mr. John and Ms. Janet Reidler, Upper Black Eddy residents, from Mr. Harold Harbold, U.S. EPA, re: Results from a February 1994 sampling of their residential well, indicating that all chemical contaminants were undetected or below the MCL, 7/18/94. P. 305265-305265.
101. Letter to Mr. Raymond Miller, Upper Black Eddy resident, from Mr. Harold Harbold, U.S. EPA, re:

Response to a telephone call from Mr. Miller's daughter requesting a fact sheet on bis (2-ethylhexyl) phthalate and a summary of sampling results from the past year, 7/21/94. P. 305266-305266.

102. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Glenn Howard, Federal Bureau of Reclamation, re: Transmittal of a U.S. Geological Survey (USGS) table estimating the volume of water to be generated during pump tests and preliminary data on the quality of water in each well, 8/19/94. P. 305267-305268. The Pump Test Water Characterization Table is attached.
103. Report: Monitoring Well Installation and Hydrogeologic Report, prepared by Weston, 9/15/94. P. 305269-305276.
104. Report: Analytical Report, Boarhead Farms, Superfund Removal/Remedial Acct# TFA03N9Y2, Lab Request No. REQ94128, prepared by U.S. EPA, 11/3/94. P. 305277-305307.
105. Report: Boarhead Farms NPL Site Interim Action, Analysis of Water Generated During Pump Tests and Contained in Storage Tank, prepared by Grace Analytical Lab, Inc., 11/14/94. P. 305308-305336.
106. Report: Boarhead Farms NPL Site Trip Report, prepared by Weston, 11/18/94. P. 305337-305377.
107. Report: Inorganic Data Validation (IM1 Level), Case 22732, prepared by ESAT, 11/21/94. P. 305378-305457. A November 28, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Susanne Stevens, U.S. EPA, is attached.
108. Key excerpt from Bucks County 1994 Water Supply Systems Update and Inventory report, prepared by Bucks County Planning Commission, 12/94. P. 305458-305463. A December 8, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, is attached.
109. Report: Inorganic Data Validation (IM1 Level), Case 22785, prepared by ESAT, 12/1/94. P. 305464-305546. A December 6, 1994, transmittal memorandum to Mr. Harold

Harbold, U.S. EPA, from Ms. Susanne Stevens, U.S. EPA, is attached.

110. Report: Level M1 Organic Data Validation for Case 22732, prepared by ESAT, 12/9/94. P. 305547-305763. A December 13, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Susanne Stevens, U.S. EPA, is attached.
111. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Curtis Schreffler, USGS, re: Transmittal of table, "Summary of Open-Hole Pumping Test Results for Boarhead Farms Superfund Site," 12/9/94. P. 305764-305765. The table is attached.
112. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Glenn Howard, Federal Bureau of Reclamation, re: Transmittal of revised Interim Action Statement of Work and two tables noting treatment requirements, 12/13/94. P. 305766-305773. A December 27, 1994, transmittal memorandum to Mr. Wally Shaheen and Mr. Joe Shields, USACE, from Mr. Harold Harbold, U.S. EPA, is attached.
113. Report: Level M1 Organic Data Validation for Case 22785, prepared by ESAT, 12/14/94. P. 305774-306030. A December 15, 1994, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Susanne Stevens, U.S. EPA, is attached.
114. Drum Inventory, Boarhead Farms RI/FS, (author not cited), 1/17/95. P. 306031-303037.
115. Memorandum to Mr. Gerald Heston, U.S. EPA, from Mr. Samuel Baughman, Weston, re: An Addendum to the Hydrogeologic Report dated September 15, 1994, 1/20/95. P. 306038-306040.
116. Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, re: Transmittal of Form 1s for sample CNC13, pesticides, for the Organic Data Validation Report, Case 22732, 2/8/95. P. 306041-306045. The Form 1s are attached.
117. Report: Technical Report on Performance Requirements, Boarhead Farms NPL Site, Interim Action, Groundwater Treatment System, prepared by the Federal Bureau of Reclamation, 2/95. P. 306046-306063. A February 9, 1995, transmittal letter to Mr. Harold Harbold, U.S.

EPA, from Mr. Glenn Howard, Federal Bureau of Reclamation, is attached.

118. Memorandum to Ms. Donna Connery, CH2M Hill, from Vijaya Mylavarapu, CH2M Hill, re: Summary of telephone conversation with EPA on February 8, 1995, 2/10/95. P. 306064-306067.
119. Report: Organic Data Validation for DAS R3043, SDG 0431219393, prepared by ESAT, 3/6/95. P. 306068-306230. A March 13, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, and the Regional Acceptance Form (RAF) for DAS R3043, are attached.
120. Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of major topics discussed at conference call on February 24, 1995, which will serve as the basis for CH2M Hill's approach to the Ecological Risk Assessment for the site, 3/8/95. P. 306231-306233.
121. Report: Analytical Report, Boarhead Farms, Superfund Removal/Remedial Acct# TFA03N9Y2, Lab Request No. REQ95046, prepared by U.S. EPA Region III Central Regional Laboratory, 3/9/95. P. 306234-306263.
122. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Robert Davis, U.S. EPA, re: Transmittal of several items to be forwarded to the contractor for help in completing the ecological risk assessment, 3/14/95. P. 306264-306264.
123. Report: Inorganic Data Validation of Case 23102, prepared by ESAT, 3/27/95. P. 306265-306371. A March 30, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
124. Report: Inorganic Data Validation for Case 23086, prepared by ESAT, 3/28/95. P. 306372-306503. A March 30, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.

125. Report: Inorganic Data Validation, Case 23114, prepared by ESAT, 3/28/95. P. 306504-306635. An April 3, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
126. Report: Inorganic Data Validation for DAS R3044, SDG 0441219395, prepared by ESAT, 3/30/95. P. 306636-306705. A March 31, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, and the RAFs for DAS R3044, are attached.
127. Report: Organic Data Validation for Case R3043, prepared by ESAT, 3/31/95. P. 306706-307989. Appendix C and Appendix E are attached.
128. Report: Inorganic Data Validation for DAS R3044, SDG 0441229367, prepared by ESAT, 3/31/95. P. 307990-308132. The following are attached:
- a) an April 18, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia E. Caporale, U.S. EPA;
  - b) an April 13, 1995, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Mary Ellen Schultz, U.S. EPA;
  - c) the RAFs for DAS R3043 and DAS R3044.
129. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Table 2, "Planned List of Nature/Extent Graphics for Chapter 4 of the Boarhead Farms RI Report," 4/5/95. P. 308133-308147.
130. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. Gary Paulachok, USGS, re: A letter report summarizing all data collected during the packer and aquifer tests, performed by the USGS at the site, 4/14/95. P. 308148-308148.
131. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. Gary Paulachok, USGS, re: Draft administrative letter report concerning work performed by the USGS, as part of the hydrogeological investigation at the site, 4/21/95. P. 308149-308297.
132. Table, "Detected Chemicals Only and MCLs," 5/3/95.

- P. 308298-308326. A list of data qualifier codes is attached.
133. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of CH2M Hill's progress on the Public Health Risk Assessment (RA), 5/17/95. P. 308327-308328.
  134. Report: Stage 1B Cultural Resources Investigation Boarhead Farms Site Upper Black Eddy, Bridgeton Township Bucks County, Pennsylvania, prepared by Foster Wheeler Environmental Corporation (Foster Wheeler), 6/95. P. 308329-308368.
  135. Report: Boarhead Farms Superfund Site Engineering Evaluation/Cost Analysis (EE/CA), prepared by U.S. EPA, 6/95. P. 308369-308388.
  136. Memorandum to Ms. Donna Connery, CH2M Hill, from Vijaya Mylavarapu, CH2M Hill, re: Summary of conference call on June 5, 1995, concerning past submittals to EPA, and the approach to the Public Health RA, 6/9/95. P. 308389-308391.
  137. Technical Memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Boarhead Farms RI/FS Subsurface Soil Sampling around Test Pit Excavations and Wetlands Area 12, and Extension of Surface Soil Sampling Grid in Wooded Wetlands, 6/16/95. P. 308392-308499.
  138. Letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Transmittal of the Boarhead Farms RI/FS, Stage 1B CRS Report, 7/7/95. P. 308500-308500.
  139. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Robert Davis, U.S. EPA, re: Preliminary comments on the Draft RI, 11/3/95. P. 308501-308504.
  140. Memorandum to Mr. Harold Harbold, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrogeologic review of the Draft RI Report and comments concerning figures and data presentation, 12/4/95. P. 308505-308506.
  141. Memorandum to Mr. David Ewald, PADER, from Mr. Bruce McClain, PADER, re: Review of RI Report dated October 2, 1995, and comments to be sent to EPA for consideration, 12/8/95. P. 308507-308508.

142. Report: Pre-Design Sampling Effort Scope of Work, (author not cited), 12/20/95. P. 308509-308562.
143. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. David Ewald, PADER, re: Transmittal of a memorandum regarding the draft RI Report and PADER's comments concerning the report, 12/29/95. P. 308563-308563.
144. Letter to Mr. David Ewald, PADEP, from Mr. Harold Harbold, U.S. EPA, re: Proposal of a removal action at the site to remediate shallow ground water posing a threat to human health, transmittal of an Engineering Evaluation/Cost Analysis, and request for Applicable or Relevant and Appropriate Requirements (ARARs) for the removal action, 1/17/96. P. 308564-308564.
145. Report: Analytical Report, Boarhead Farms Superfund Removal/Remedial, Account # TFA03N9Y2, Lab Request # REQ96038, prepared by U.S. EPA, 1/23/96. P. 308565-308601. A blank Customer Survey is attached.
146. Memorandum to Mr. Robert Davis, U.S. EPA, from Mr. Robert Burr, U.S. Fish and Wildlife Service, re: Comments on the remedial alternatives for the Boarhead Farms FS, 1/25/96. P. 308602-308604.
147. Report: Inorganic Data Validation (IM2 Level), Case 24238, SDGs MCZ617 and MCZ622, prepared by ESAT, 1/30/96. P. 308605-308669. A February 5, 1996, transmittal memorandum to Mr. Harold Harbold, U.S. EPA, from Ms. Cynthia Caporale, U.S. EPA, is attached.
148. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. David Ewald, PADER, re: Response to Mr. Harbold's January 17, 1996, letter requesting ARARs for the proposed removal action at the site, 2/8/96. P. 308670-308767. An Application for National Pollutant Discharge Elimination System (NPDES) Permit, New and Existing Industrial Dischargers, is attached.
149. Report: Draft Baseline Risk Assessment for Residential Groundwater Exposure Boarhead Farms RI/FS, 2/15/96. P. 308768-308922. A February 15, 1996, transmittal letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, is attached.
150. Report: Boarhead Farms RI/FS; Preliminary Remediation

- Goals (PRGs) for Onsite Soil, prepared by CH2M Hill, 2/23/96. P. 308923-308974. A February 23, 1996, transmittal letter to Mr. Harold Harbold, U.S. EPA, from Ms. Donna Connery, CH2M Hill, is attached.
151. Telephone conversation record of a call to Ms. Donna Connery, CH2M Hill, from Mr. J.E. Godfrey, PA Department of Health (PADOH), re: The Keystone well depth at the Boarhead Farms site, 3/12/96. P. 308975-308978. A copy of the USGS report noting the Keystone well logged to a total depth of 760 feet, and a transmittal facsimile to Mr. J.E. Godfrey, from Ms. Donna Connery, are attached.
152. Letter to Mr. James Harper, U.S. EPA, from Mr. David Ewald, PADER, re: Transmittal of a February 8, 1996, letter to Mr. Harold Harbold, concerning Pennsylvania ARARs, and announcement that Mr. Dustin Armstrong was assigned as the PADEP Project Officer for the site, 4/10/96. P. 308979-308980.
153. Letter to Mr. James Harper, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Transmittal of a technical memorandum summarizing the results of CH2M Hill's focused literature search for remediation of surface soil and sediment at the site, 4/18/96. P. 308981-309023. The technical memorandum, entitled "Literature Search for Ecological Risk Assessment Criteria for Remediation of Surface Soil and Sediment," is attached.
154. Memorandum to Mr. James Harper, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrogeologic review and comments concerning the Draft Work Plan, 5/21/96. P. 309024-309024.
155. Report: Boarhead Farms NPL Site, Upper Black Eddy, PA, Rapid Response, Final Scope of Work, prepared by USACE, 5/21/96. P. 309025-309161.
156. Letter to Mr. James Harper, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Summary of analytes detected in residential wells through 1994, 5/23/96. P. 309162-309164. Two May 23, 1996, spreadsheets are attached.
157. Report: Design Analysis Draft Final, Boarhead Farms



Superfund Site Goundwater Treatment Plant, Rapid Response Design Package, prepared by USACE, 6/96.  
P. 309165-309435.

158. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Notification of completed review of three Feasibility Study Draft Documents, and that PADEP has no comments regarding these documents, 6/3/96. P. 309436-309436.
159. Letter to Mr. Graham Roddick, Graham Security Police, from Ms. Donna Connery, CH2M Hill, re: Notification that the conclusion of security services at the site is scheduled for the week of June 24, 1996, 6/10/96. P. 309437-309437.
160. Report: Laboratory Analysis Report (T607221), prepared by Laboratory Resources Inc., 7/29/96. P. 309438-309558.
161. Letter to Upper Black Eddy Resident, from Mr. James Harper, U.S. EPA, re: Transmittal of results of last round of sampling results on home wells, 7/31/96. P. 309559-309559.
162. ATSDR Record of Activity, requested by Mr. James Harper, U.S. EPA, 8/23/96. P. 309560-309561.
163. Report: Boarhead Farms NPL Site Upper Black Eddy, PA, Rapid Response, Draft Scope of Work, Modification #1, prepared by USACE, 10/3/96. P. 309562-309854. A report entitled Specifications, Boarhead Farms Superfund Site Groundwater Treatment Plant Rapid Response Design Package, dated September 30, 1996, and a transmittal memorandum to Mr. James Harper, U.S. EPA, are attached.
164. Memorandum to Mr. James Harper, U.S. EPA, from Ms. Nancy Rios Jafolla, U.S. EPA, re: Review for toxicological accuracy and comments concerning the Boarhead Farms RI - Risk Assessment, 10/18/96. P. 309855-309856.
165. Report: Work Plan Addendum, Boarhead Farm NPL Site Upper Black Eddy, Pennsylvania, prepared by IT Corp.,

11/96. P. 309857-309901.

166. Report: Draft Ecological Risk Assessment Boarhead Farms Upper Black Eddy, PA, prepared by U.S. EPA, U.S. Fish and Wildlife Service, and Weston, 11/96. P. 309902-310659.
167. Letter to Ms. Dustin Armstrong, PADEP, from Mr. James Harper, U.S. EPA, re: Request for ARARs for the remediation of the Boarhead Farms Site, 11/6/96. P. 310660-310662. An undated certified mail receipt is attached.
168. Memorandum to Mr. Thomas Mathison, IT Corp., from Mr. Wally Shaheen, USACE, re: Response to IT Corp.'s concerns and questions regarding the residential well and onsite treatment systems at the site, 11/15/96. P. 310663-310670. A November 12, 1996, letter to Mr. Wally Shaheen, USACE, from Mr. Thomas Mathison, IT Corporation, and a November 13, 1996, internal memorandum to USACE personnel, from Ms. Janelle Mavis, are attached.
169. Letter to Mr. Wally Shaheen, USACE, from Mr. Thomas Mathison, IT Corp., re: Transmittal of the revised Work Plan Amendment for the site and the annotated responses to the comments on the Draft Plan, 11/22/96. P. 310671-310678. The undated annotated comments on the work plan, prepared by IT Corp., are attached.
170. Letter to Mr. Terence Brown, Bridgeton Township Zoning Officer, from Mr. Thomas Mathison, IT Corp., re: Transmittal of the completed zoning permit application for the groundwater treatment building, 12/3/96. P. 310679-310680. The December 3, 1996, Bridgeton Township Application for Zoning Permit is attached.
171. Memorandum to Mr. James Harper, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Recommendations for sampling residential wells in the Boarhead Farms Site area, 12/6/96. P. 310681-310690.
172. Memorandum to Ms. Lynn Vogel, Mr. Rick Cusick, and Mr. Pete Walters, CH2M Hill, from Ms. Donna Connery, CH2M Hill, re: Project instructions for the December 1996 sampling of residential wells at the site, in support of the RI/FS, 12/10/96. P. 310691-310700. A table,

- entitled "Residential Well Sample List," is attached.
173. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Response to request for site-specific ARARs for the Boarhead Farms Site, 12/24/96. P. 310701-310701.
  174. Report: Boarhead Farms Site Remedial Investigation Report, Volume 1: RI Report, prepared by CH2M Hill, 1/97. P. 310702-311294. A January 31, 1997, transmittal letter is attached.
  175. Report: Boarhead Farms Site Remedial Investigation Report, Volume 2: Appendix A, prepared by CH2M Hill, 1/97. P. 311295-312709.
  176. Report: Boarhead Farms Site Remedial Investigation Report, Volume 3: Appendices B through I, prepared by CH2M Hill, 1/97. P. 312710-313219.
  177. Memorandum to Mr. James Harper, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Transmittal of Revised Residential Well Survey, dated January 8, 1997, and a trip report for residential well sampling, dated January 13, 1997, 1/13/97. P. 313220-313230. The revised residential well survey is attached.
  178. Letter to Mr. Wayne Brown, resident, from Ms. Donna Connery, CH2M Hill, re: Response to request for analytical results for the water sample collected from Mr. Brown's residential water supply, 1/23/97. P. 313231-313233. The results and a legend are attached.
  179. Report: Organic Data Validation (M3 Level), Case 25236, prepared by ESAT, 1/30/97. P. 313234-313458. A February 3, 1997, transmittal memorandum to Mr. James Harper, U.S. EPA, from Mr. Fredrick Foreman, U.S. EPA, is attached.
  180. Letter to Mr. Gary Paulachok, USGS, from Mr. Francis Snock, U.S. EPA, re: Completion of Hydrogeological Investigation for Boarhead Farms (DW14943718-01-3) and available funds, 2/3/97. P. 313459-313459.

181. Letter to Mr. Phil Stearns, IT Corp., from Mr. Harrison Bauman, GPU Energy (GPU), re: Plans for supplying service at the site, 2/4/97. P. 313460-313461.
182. Report: Inorganic Data Validation (IM2 Level), Case 25236, prepared by ESAT, 2/25/97. P. 313462-313573. A March 5, 1997, transmittal memorandum to Mr. James Harper, U.S. EPA, from Mr. Fredrick Foreman, U.S. EPA, is attached.
183. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Review and comments concerning the January 1997 Draft FS, 3/19/97. P. 313574-313577.
184. Handwritten telephone conversation record of Mr. James Harper, U.S. EPA, with GPU Energy, 3/27/97. P. 313578-313578.
185. Memorandum to Mr. James Harper, U.S. EPA, from Mr. Bruce Rundell, U.S. EPA, re: Hydrogeologic review of Draft FS and options to be added and evaluated, 4/1/97. P. 313579-313580.
186. Letter to Mr. James Harper, U.S. EPA, from Mr. Bede Portz, GPU, re: Summary of meeting and telephone conversations concerning the installation of electrical service at the site, 4/1/97. P. 313581-313581.
187. Letter to Mr. Bede Portz, GPU, from Mr. James Harper, U.S. EPA, re: Response to telephone conversation and letter concerning the installation of electrical service at the Boarhead Farms Site and transmittal of a disk copy of the RI, 4/7/97. P. 313582-313582.
188. Memorandum to Mr. J.E. Godfrey, PADOH, from Bucky Walters, ATSDR, re: Request from Mr. James Harper, U.S. EPA, for a health consultation on potable residential well water sampling data, 6/2/97. P. 313583-313584. A June 5, 1997, routing and transmittal slip to Mr. James Harper, U.S. EPA, from Bucky Walters, ATSDR, is attached.
189. Report: Boarhead Farms Site, Feasibility Study Report, prepared by CH2M Hill, 7/97. P. 313585-313859.
190. Memorandum to Mr. James Harper and Ms. Andrea Lord, U.S. EPA, from Ms. Patricia Flores-Brown, U.S. EPA, re:

Review and transmittal of the pertinent ARARs for remedial activities at the site, 9/10/97. P. 313860-313867. The ARARs are attached.

191. Memorandum to Mr. James Harper and Ms. Andrea Lord, U.S. EPA, to Ms. Nancy Rios Jafolla, U.S. EPA, re: Transmittal of risk calculations for modeled trichloroethylene (TCE) emissions during the soil aeration process, 10/22/97. P. 313868-313872. An October 20, 1997, memorandum to James Harper and Andrea Lord from Patricia Flores-Brown detailing results from her soil aeration process evaluation and undated risk calculations for the highest allowable TCE concentrations are attached.
192. Memorandum to Ms. Andrea Lord, U.S. EPA, from Ms. Anne Estabrook, CH2M Hill, re: Cost estimate for the soil aeration treatment of benzene and TCE contaminated hot spots on the site, 11/25/97. P. 313873-313874. The November 25, 1997, cost estimate is attached.
193. Report: Operation and Maintenance Manual, Groundwater Recovery and Treatment System, Boarhead Farm Superfund Site, 12/97. P. 313875-314473. A December 9, 1997, transmittal letter to Mr. Wally Shaheen, U.S. Army Corps of Engineers, from Mr. Thomas D. Mathison, IT Corporation, is attached.
194. Interim BTAG Wetlands Policy, undated. P. 314474-314476.
195. Memorandum to Mr. Steve O'Neil, PADER, from Mr. Dennis Matlock, U.S. EPA, re: Transmittal of Environmental Assessment Form for Boarhead Farms pond draining operation, undated. P. 314477-314488. The undated Environmental Assessment Form completed by U.S. EPA is attached.
196. Report: Boarhead Farms Superfund Site Engineering Evaluation/Cost Analysis (EE/CA), prepared by U.S. EPA, undated. P. 314489-314505.
197. Table, "Detected Maximum and Average Concentration of Surface water for Selected Metals Boarhead Farm RI/FS," undated. P. 314506-314506.
198. Table, "Detected Maximum and Average Concentration of Sediment Results for Selected Metals Boarhead Farm

- RI/FS," undated. P. 314507-314507.
199. Memorandum to Mr. James Harper, U.S. EPA, from Ms. Nancy Rios Jafolla, U.S. EPA, re: Toxicological Review and comments concerning the RI/FS Report, undated. P. 314508-314509.
200. Proposed Plan, Boarhead Farms Site, 1/98. P. 314510-314532.
201. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Transmittal of PADEP's water quality based effluent limitations in response to CH2M Hill's November 5, 1996, request for discharge limits, 1/7/97. P. 314533-314533.
202. Letter to Mr. James Harper, U.S. EPA, from Ms. Donna Connery, CH2M Hill, re: Transmittal of the reference list which was inadvertently omitted from the January 31, 1997, remedial investigation report, 3/17/97. P. 314534-314542. The reference list is attached.
203. Report: Scope of Services for Boarhead Superfund Site, Bucks County, PA, Chemistry Instructions, (no author cited), 7/23/97. P. 314543-314550. A July 23, 1997, memorandum to Mr. Tom Mathison, Ms. Sandra Tersegno, and Mr. Phil Stearns, IT Corp.; Mr. Kent Spence, Mr. Jim Beran, Ms. Janet Doan, and Ms. Janelle Mavis, USACE; Mr. James Harper, U.S. EPA; and Ragesh Patel, PADEP, from Mr. Wally Shaheen, transmitting revision 1 to the USACE chemistry instructions, is attached.
204. Report: Health Consultation, Boarhead Farms, Bridgeton, Bucks County, Pennsylvania, CERCLIS No. PAD047726161, prepared by ATSDR, 12/30/97. P. 314551-314597.
205. Report: Technical Analysis of the Boarhead Farms Superfund Site, prepared by U.S. Department of the Interior (DOI), Fish and Wildlife Service (FWS), and USGS, 2/18/98. P. 314598-314613. A February 26, 1998, letter to Mr. Thomas Voltaggio, U.S. EPA, from Mr. Willie Taylor, U.S. DOI, regarding the preliminary

natural resources survey and issues concerning the site, is attached.

206. Letter to Mr. James Harper, U.S. EPA, from Mr. George Danyliw, PADEP, re: Explanation of PADEP's position on ARARs for the rapid response at the site and specific concerns related to the implementation of the rapid response, 2/26/98. P. 314614-314617.
207. Letter to Mr. Dustin Armstrong, PADEP, from Mr. James Harper, U.S. EPA, re: Notification of a second 30 day extension to the public comment period for the proposed plan and transmittal of the preliminary natural resources survey, 3/10/98. P. 314618-3149618.
208. Memorandum to the file from Mr. James Harper, U.S. EPA, re: Determination that active soils washing is not a cost effective alternative for the proposed remediation of the site, 4/1/98. P. 314619-314619.
209. Report: Comments on the U.S. Environmental Protection Agency's Proposed Remedial Action Plan for the Boarhead Farms Superfund Site, Bucks County, Pennsylvania, prepared by Lawler, Matusky & Skelly Engineers, 4/3/98. P. 314620-314644. An April 3, 1998, letter to Mr. James Harper, U.S. EPA, from Mr. Michael Steinberg, Morgan, Lewis & Bockius Counselors at Law (Morgan, Lewis & Bockius), transmitting the report on behalf of a group of potentially responsible parties (PRPs) and request for EPA to modify the proposed remedial action plan, is attached.
210. Letter to Mr. James Harper, U.S. EPA, from Farleigh Earhart, Morgan, Lewis & Bockius, re: Transmittal of the corrected cover sheet for the comments on the proposed remedial action plan report, 4/14/98. P. 314645-314646. The corrected report cover sheet is attached.
211. Memorandum to Mr. Wally Shaheen, USACE, from Mr. Tom Mathison, IT Corp., re: Transmittal of a table detailing the analytical results for the onsite

- treatment system, 5/5/98. P. 314647-314653. An April 30, 1998, table "Boarhead Farm, Target Compound Sampling Data, Sample Date: 4/17/98," and a May 5, 1998, table "Boarhead Farms Onsite Treatment Data," are attached.
212. Laboratory analysis data package, prepared by Analytical Laboratory Services, Inc., 5/12/98-5/27/98. P. 314654-314826.
213. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Comments on the draft ROD which was received on June 25, 1998, 7/16/98. P. 314827-314835. A June 8, 1998, letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, providing comments on the portion of the draft Record of Decision (ROD) which was received on June 2, 1998, is attached.
214. Letter to Mr. James Harper, U.S. EPA, from Mr. Dustin Armstrong, PADEP, re: Follow up to EPA and PADEP's July 22, 1998, telephone conversation regarding PADEP's comments on the draft ROD, 8/4/98. P. 314836-314839. An envelope postmarked August 5, 1998, is attached.
215. Letter to Mr. Abraham Ferdas, U.S. EPA, from Mr. Joseph A. Feola, PADEP, re: Concerns regarding the operation of the ground water treatment system related to the discharge failing to meet Water Quality Based Effluent Limits and notification that PADEP is currently evaluating the ROD, 11/4/98. P. 314840-314841.
216. Letter to Mr. Abraham Ferdas, U.S. EPA, from Mr. Joseph A. Feola, PADEP, re: PADEP's concurrence with the ROD for the Boarhead Farms Site, 11/12/98. P. 314842-314844.
217. Record of Decision, Boarhead Farms Site, 11/18/98. P. 314845-314952.



#### IV. REMOVAL RESPONSE PROJECTS

- \*\* 1. Memorandum to Mr. Donald R. Clay, U.S. EPA, from Mr. Edwin B. Erickson, U.S. EPA, re: Approval of a Funding Request for a Removal Action at Boarhead Farms NPL Site, 2/26/92. P. 400001-400009. A memorandum to Mr. Edwin B. Erickson regarding request for funds for removal action is attached.
2. Memorandum to Ms. Deborah Dietrich, U.S. EPA, from Mr. Abraham Ferdas, U.S. EPA, re: Request for additional funding from the \$50 million Remedial Action funds for the site, 12/3/92. P. 400010-400012.
3. Report: Federal On-Scene Coordinator's Report for Boarhead Farms NPL Site, prepared by U.S. EPA, 6/18/92 to 9/17/93. P. 400013-400239.
4. Memorandum to Mr. Elliott Laws, U.S. EPA, from Mr. Thomas Voltaggio, U.S. EPA, re: Approval of a removal action and transmittal of a memorandum for the implementation of a non-time critical removal action at the site, 3/18/96. P. 400240-400254. The memorandum to Mr. Thomas Voltaggio, U.S. EPA, from Mr. Harold Harbold, U.S. EPA, dated March 18, 1996, is attached.
5. Letter to Mr. George Danyliw, PADEP, from Mr. James Harper, U.S. EPA, re: Notification that Mr. Harper has replaced Mr. Harbold as the Remedial Project Manager (RPM) for the site and that the USACE Rapid Response Team has been tasked to begin a removal action at the site, 4/10/96. P. 400255-400255.
6. Removal Objectives and Feasibility Cost Estimate, undated. P. 400256-400257.

V. COMMUNITY INVOLVEMENT/CONGRESSIONAL CORRESPONDENCE/IMAGERY

- \*\* 1. Sketch, Interpreted Areas of Buried Metals and Alleged Drum Burial Locations, Boarhead Farms Site, 4/26/91. P. 500001-500002. A site map is attached.
- \*\* 2. Area Map, Boarhead Farms Site, (undated). P. 500003-500003.
- 3. Report: Boarhead Farms RI/FS Community Relations Plan, prepared by CH2M Hill, 3/92. P. 500004-500025. A cover letter is attached.
- 4. Public Meeting Minutes, Boarhead Farms Superfund Site, prepared by CH2M Hill, 3/30/92. P. 500026-500038. A cover letter is attached.
- 5. Map, "Altitude and Configuration of the Potentiometric Surfaces of the Upper and Lower Aquifer Systems in Bridgeton, Nockamixon, and Tinicum Townships, Bucks County, Pennsylvania," prepared by USGS, 4/91 through 4/92. P. 500039-500039.
- 6. Map, "Boarhead Farms NPL Site," prepared by Weston, 2/28/94. P. 500040-500040.
- 7. Letter to Mr. Harold Harbold, U.S. EPA, from Mr. Gary Pearson, resident, re: Response to advertisement concerning public comments on the proposed EE/CA, 3/29/96. P. 500041-500043. An October 5, 1995, letter to Mr. Harold Harbold, U.S. EPA, from Mr. Gary Pearson, resident, is attached.
- 8. Responsiveness Summary of comments received on the public notice for the proposed interim cleanup plan and the EE/CA, author not cited, (undated). P. 500044-500044.
- 9. Map, "Interpreted Areas of Buried Metal," prepared by CH2M Hill, (undated). P. 500045-500045.
- 10. Location map, Boarhead Farms Superfund Site, (undated). P. 500046-500046.
- 11. Map, "Test Pit and Monitoring Well Locations," prepared by CH2M Hill, (undated). P. 500047-500047.
- 12. Map, "Residential Well Locations," prepared by CH2M

Hill, (undated), P. 500048-500048.

13. Map of monitoring wells and extraction wells, (undated). P. 500049-500049.
14. Transcript of public meeting, Boarhead Farms Site, 1/14/98. P. 500050-500277.
15. Electronic mail memorandum to Ms. Carrie Deitzel, U.S. EPA, from Mr. William Brokaw, re: Concerns regarding EPA's management of the remedial action design for the site, 1/16/98. P. 500278-500278.
16. Letter to Mr. James Harper, U.S. EPA, from Ms. Brenda Schneider, re: Comments and questions concerning the proposed plan, 1/23/98. P. 500279-500280. An envelope postmarked January 30, 1998, is attached.
17. Letter to Mr. James Harper, U.S. EPA, from Ms. Barbara Guth, Bridgeton Township Supervisors, re: Comments concerning the January 14, 1998, public meeting, and request for EPA to expedite the release of the requested public meeting transcript and grant the 30 day extension for public comment on the proposed plan, 2/26/98. P. 500281-500282.
18. Letter to Mr. James Harper, U.S. EPA, from Mr. Carmen Hopf, Bridgeton Township Planning Commission, re: Comments on the proposed remediation alternative, 3/3/98. P. 500283-500284.
19. Facsimile transmittal memorandum to Mr. Michael McCabe, U.S. EPA, from the Bridgeton Township Planning Commission, re: Transmittal of comments on the remedial action plan, 3/3/98. P. 500285-500287. A March 3, 1998, letter to Mr. James Harper, U.S. EPA, from Mr. Carmen Hopf, Bridgeton Township Planning Commission, providing comments on the proposed remediation alternative, is attached.
20. Letter to Mr. James Harper, U.S. EPA, from Ms. Debi Slatkin, re: Comments on the proposed remediation alternative, 3/3/98. P. 500288-500288.
21. Letter to Ms. Angela Cochnar, U.S. EPA, from the Honorable Rick Santorum, U.S. Senate, re: Request for

EPA to address the concerns of a constituent of the Honorable Santorum, regarding the site, 3/5/98. P. 500289-500292. A February 26, 1998, letter to the Honorable Rick Santorum, U.S. Senate, from Ms. Barbara Guth, Bridgeton Township Supervisors, requesting assistance to allow for a 30 day extension to the public comment period on the proposed plan, and a February 26, 1996, letter to Mr. James Harper, U.S. EPA, from Ms. Barbara Guth, Bridgeton Township Supervisors, providing comments on the public meeting and concerns regarding the proposed plan, are attached.

22. Letter to Mr. Michael McCabe, U.S. EPA, from the Honorable James Greenwood, U.S. Congress, re: Request for EPA to grant a 30 day extension to the public comment period on the proposed plan, 3/5/98. P. 500293-500293.
23. Letter to Mr. James Harper, U.S. EPA, from the Honorable Joe Conti, Senate of Pennsylvania, re: Request for EPA to consider the concerns addressed by the Bridgeton Township residents, 3/5/98. P. 500294-500294.
24. Letter to Ms. Barbara Guth, Bridgeton Township Supervisors, from Mr. James Harper, U.S. EPA, re: Notification that EPA has granted a 30 day extension to the public comment period to April 5, 1998, 3/6/98. P. 500295-500295.
25. Letter to Mr. James Harper, U.S. EPA, from Mr. Jonathan Rolleri, re: Concerns regarding the proposed remediation alternative and comments on other alternatives, 3/10/98. P. 500296-500297. An envelope postmarked March 10, 1998, is attached.
26. Letter to Mr. James Harper, U.S. EPA, from the Honorable Charles McIlhinney Jr., U.S. House of Representatives, re: Request for EPA to reconsider the remedial action plan for the site and to incorporate the concerns of residents into a new plan, 3/19/98. P. 500298-500298.
27. Letter to Mr. James Harper, U.S. EPA, from Mr. Roger Keller, Upper Black Eddy Historic Preservation Society, re: Comments on the proposed remedial action work plan

and support of the Bridgetown Township Planning Commission's position, 3/25/98. P. 500299-500301. An envelope postmarked April 11, 1998, is attached.

28. Letter to Mr. James Harper, U.S. EPA, from Wegard Holby, re: Concern with the proposed plan and support of the Bridgeton Planning Commission's position, 3/25/98. P. 500302-500303. An envelope postmarked April 11, 1998, is attached.
29. Handwritten letter to Mr. James Harper, U.S. EPA, from Mr. Larry Schultz, re: Comments concerning the proposed remediation alternative, 4/2/98. P. 500304-500306. An envelope postmarked April 2, 1998, is attached.
30. Letter to Mr. James Harper, U.S. EPA, from Ms. Barbara Guth, Mr. Wayne Brown, and Mr. John Hoernle, Bridgeton Township Supervisors, re: Transmittal of comments on the proposed remediation plan presented at the January 14, 1998, public meeting, 4/3/98. P. 500307-500314. An April 3, 1998, letter to Mr. James Harper, U.S. EPA, from Ms. Barbara Guth, Mr. Wayne Brown, and Mr. John Hoernle, Bridgeton Township Supervisors, providing comments on EPA's preferred alternative for remediation and on additional issues which need to be addressed, is attached.
31. Letter to Ms. Barbara Guth, Bridgeton Township Supervisors, from Mr. James Harper, U.S. EPA, re: Transmittal of comments on the proposed plan submitted by the law firm representing a group of PRPs, 4/6/98. P. 500315-500340. An April 3, 1998, letter to Mr. James Harper, U.S. EPA, from Mr. Michael Steinberg, Morgan, Lewis & Bockius, transmitting comments on the proposed remedial action plan on behalf of a group of PRPs, and an April 3, 1998, report entitled "Comments on the U.S. EPA's Proposed Remedial Action Plan for the Boarhead Farms Superfund Site, Bucks County, Pennsylvania," are attached.

#### GUIDANCE DOCUMENTS

1. Wildlife Species of Bucks County, Pennsylvania, Appendix, prepared by Pennsylvania Game Commission, 5/15/92.
2. National Oceanic and Atmospheric Administration (NOAA) Quick Reference Cards for NOAA Screening Guidelines, (undated).